

DILSTON BYPASS

SHAW SURE DELIVERED AT DILSTON



MAIN CONSTRUCTION COMPANY : Shaw Contracting
PROJECT END VALUE : \$45 Million
LENGTH : 2kms Dual Carriageway & 7kms 3 Lane Highway
CLIENT : Department of Infrastructure, Energy & Resources
COMPLETION : August 2011
LANDSCAPING : Towns Landscaping

Shaw Contracting cemented their excellent reputation for civil construction with their work on the Dilston Bypass in Tasmania, with the new road under traffic several months ahead of schedule. As head contractors for Tasmania’s Department of Infrastructure, Energy and Resources (DIER), Shaw constructed two kilometres of dual carriageway, seven kilometres of three lane highway, a new bridge, two stock underpasses and several waterways crossings. The result is an improvement in the safety and quality of life for residents of the small town of Dilston, and an upgraded transport link to Bell Bay Port for freight travelling the East Tamar Highway.

There was a combination of 8.5km of greenfields road construction and integration with existing roadways at the northern and southern ends. At the southern end, two kilometres of new dual carriageway incorporates a southbound underpass ramp on the southern junction and at the northern Seagull junction, three kilometres of dual carriageway replaces the previous road, and includes fog detection speed reduction signs at the junction.

A key feature of the project is to have 2+1 lane configuration alternating in sections with a wire rope safety fence separating opposing traffic, providing both efficient lane configuration and also elimination of potential head-on collisions.

“Doing a greenfields project like this has benefits, as there are fewer issues with road users in terms of traffic management,” said DIER Contract Supervisor, Paul Walker.

“The project went very smoothly, and with a very good safety record. Shaw are very good at moving earth, and had traffic moved into the bypass in May. The original project completion was mid August. The only work which was delayed was sealing on two short sections which was held up by weather.”

Weather was one of the project challenges, with heavier than usual rain causing some minor landslips and flooding from the

three creeks which cross the project site. Another challenge was the buried metal corrugated structures between 6m and 8m high which were constructed over the waterways, which required some geotechnical ingenuity to ensure sound foundations and some trades expertise for the bolt together assembly which proved more complex than the usual concrete and box culvert designs for waterway crossings.

While the only major environmental issues for the site were the soil erosion minimisation and water quality protection issues which apply to most civil projects, there was a need to manage Heritage issues in the form of two Aboriginal Heritage sites.

With wildlife prevalent in the area, measures to reduce road kill have been incorporated into the design both to protect the fauna and the motorists. These measures included provision of an extensive network of Wallaby proof fencing.

The Dilston Bypass was fully funded by the Federal Government, and is part of a broader series of projects for the East Tamar Highway Upgrade, with some of the other projects jointly funded by Federal and Tasmanian State Government funds. There are also other major highway upgrades also underway in the state, creating something of a logistical challenge for DIER and for the various contractors and subcontractors.

“Multiple projects stretch everyone, but we have achieved everything well,” commented Paul Walker.

Shaw Contracting had up to 95 workers on the project during the seven months of construction, and more than fifty subcontractors. DIER maintained a team of five staff at the site, including two supervisors, two consulting engineers and administrative support.

Shaw is a leading name in Tasmania’s civil construction, earthmoving and contract mining industries, with a track record of achievements going back to the 1930s. A family owned and operated business, Shaw employs over 200 highly skilled and motivated people, including in house engineers. This enables the company to work closely with clients to deliver design and construction outcomes of an extremely high calibre, with consistent project management from the earliest stages through to completion.

The capabilities of the company are extensive, including civil design, building construction and project management services for earthworks; road and bridge construction; residential; commercial and industrial development; concrete construction; plant and equipment hire; fabrication and erection of steelwork and drainage, including water, sewerage and stormwater reticulation. Shaw have undertaken major highway construction in Tasmania, on the mainland and overseas, and have constructed water and wastewater treatment plants, complex industrial structures and electrical infrastructure.

The company office complexes and workshops are an excellent showcase of their construction talents. They were built by Shaw using a combination of structural steel and pre-case tilt up concrete panels, which were prefabricated in-house.

Shaw has been involved in the construction of numerous irrigation schemes, dams and other retaining structures over the past 30 years, with recently completed projects including the Launceston Flood Gates. They have also completed rail projects; environmental rehabilitation and remediation; mining projects including open cut pit design, overburden removal, drill, blast, load and haul; and landfill management.

Shaw have Federal Safety Commission Certification for the Australian Government Building and Construction OHS Accreditation Scheme, and have also developed an Integrated Management System that is individually certified to each of the Australian Standards for Quality, Environmental and Occupational Health and Safety Assurance – ISO 9001; ISO 14001 and AS/NZS 4801. The company is audited by NATA Certification Services on an annual basis, and also undertakes regular internal audits to ensure peak performance of all staff and company operational systems.

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ROUNDEL CORRUGATED-PLATE STRUCTURES – SAVING TIME AND MONEY...

Roundel Civil Products, the Perth-based manufacturer of corrugated metal pipes and corrugated-plate structures, supplied seven arch structures for the Dilston Bypass – East Tamar Highway project in northern Tasmania during 2010.

The structures supplied range in size from 4.5m to 8m wide, up to 5m tall and from 33m to 77m in length.

“We supply a wide range of shapes and sizes in many different corrugation profiles and material thicknesses but, whatever the application, the main advantage of corrugated-plate structures is that they are shipped to site easily for on-site assembly. Once structures are assembled, backfilling has to be carried out carefully but, providing clear compaction guideless are followed, it’s a straightforward process”, says Bev Byard, General Manager for Roundel.

“The product offers considerable savings over similar concrete structures in terms of both time and money. And we’re reducing the project’s carbon footprint – the steel includes recycled materials and can be fully recycled again if the need arose.”

“We were very pleased with the service we received from Roundel. Once everything had been approved by the authorities the structures were supplied to site quickly and installation took less time than we expected. It went well,” says Joe Luttrell, project manager for Shaw Contracting who carried out the project. “And we got good back-up from the supplier.”

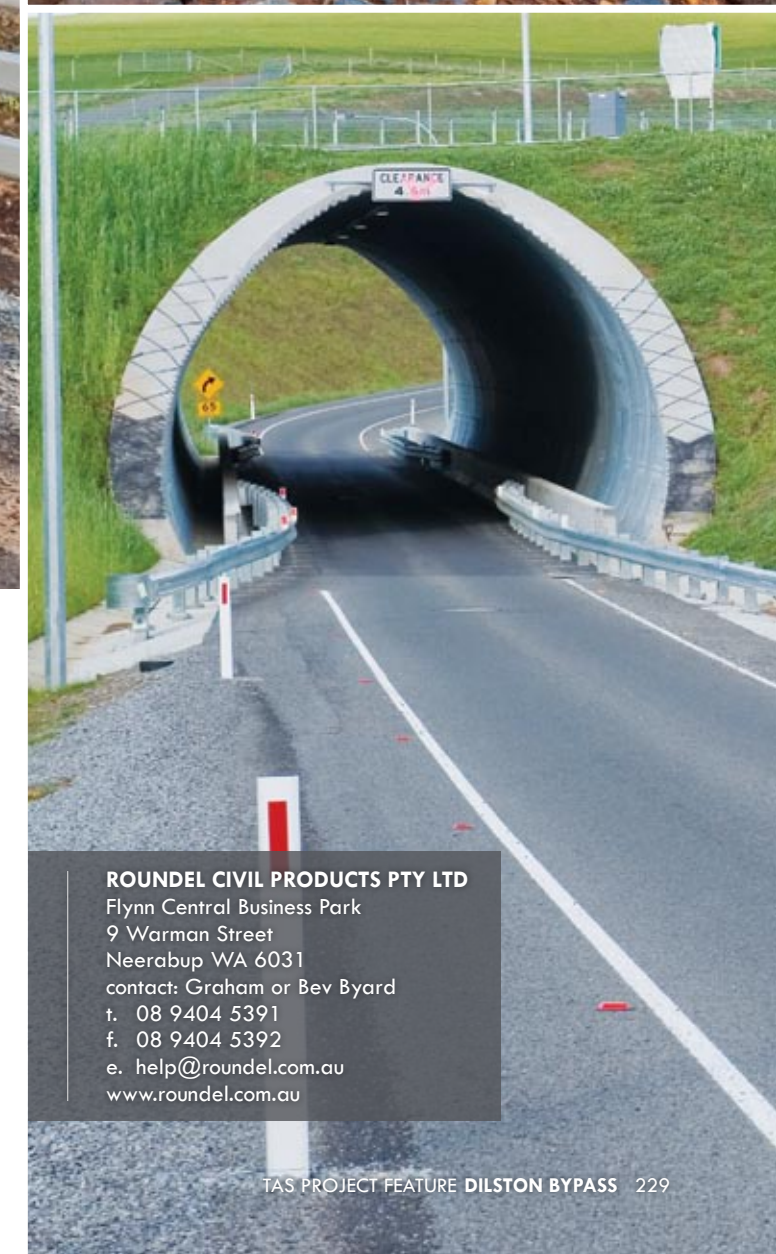
Roundel has supplied pipes and structures all over Australia but this was their first project in Tasmania.

“We’ve supplied similar structures throughout the country including much larger arches to mine sites for stockpile tunnels and vehicle

underpasses, but this was our first major project in Tasmania. The site visits have been a particular pleasure as they’ve been my first visits to the island. I’ll certainly be back,” says Bev.

Other recent projects carried out by Roundel include the supply of corrugated-plate arches, used for stockpile reclaim tunnels, on the Worsley Alumina Expansion Project for BHP-Billiton in WA. The tunnels featured the CBS-rib system which combines corrugated plate with reinforced concrete ribs, cast on site. The ribs allow for far larger spans and heavier loads.

Roundel plans to open a factory to manufacture its corrugated pipe in Victoria later in 2011 to complement its existing factories in Qld and WA. The manufacturing bases are supplemented by its state-of-the-art mobile pipe mills – Roundel is considered to be the market leader in site-based culvert manufacture, the preferred option for remote, large-scale mining projects.

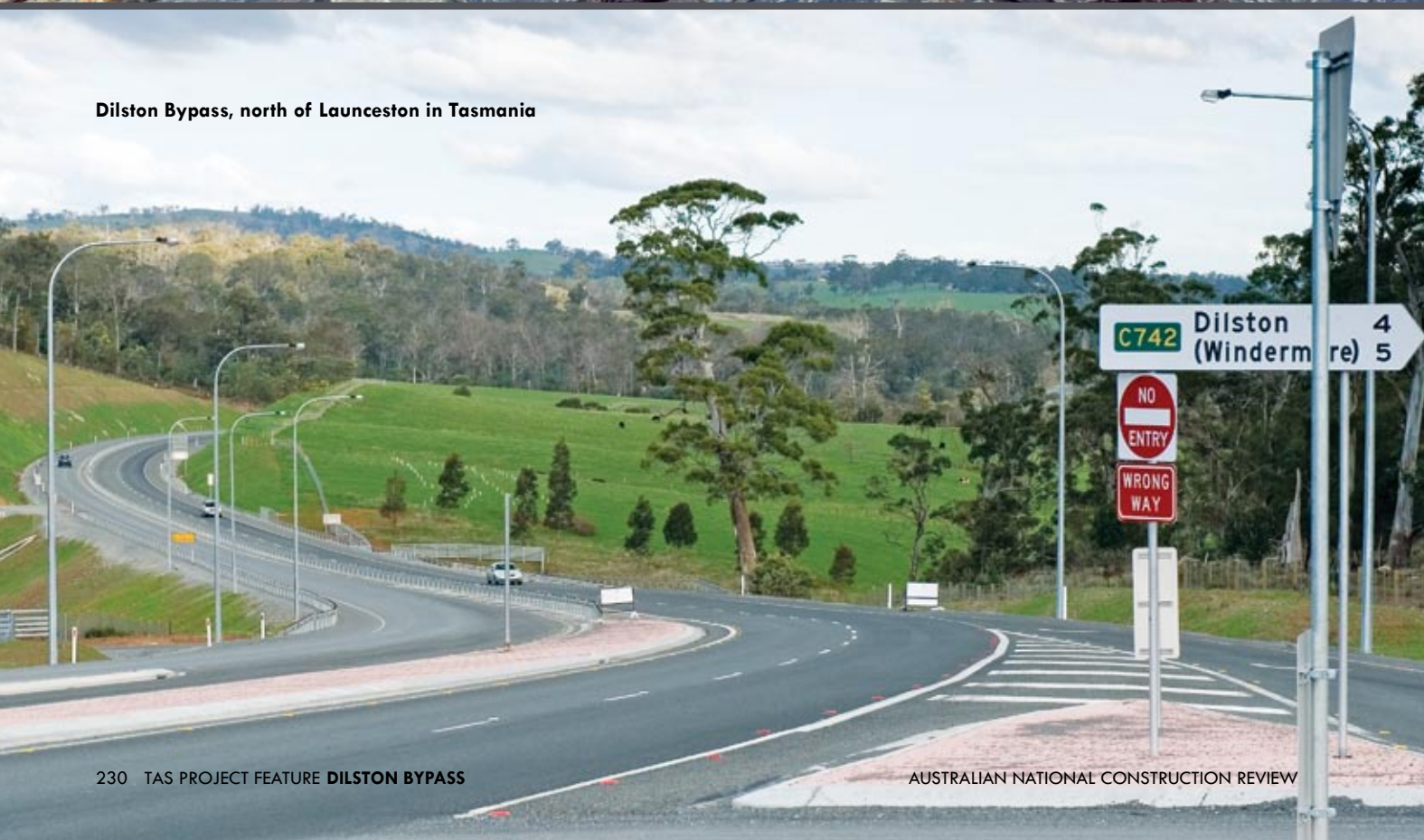


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The bridge built for the Dilston Bypass



Dilston Bypass, north of Launceston in Tasmania



A COMPANY TOO GOOD TO BYPASS



Founded in 2001, BLH Engineering & Construction is a Tasmanian-based company specifically set up to provide project management, work pack development, fabrication, mechanical installation and labour hire services for major projects.

BLH's fully equipped fabrication workshop allows it to undertake diverse fabrication projects and to support its on-site project and maintenance activities.

Labour hire is an integral part of BLH's business. The company maintains a database of experienced personnel that it engages for single-source construction, maintenance and shutdown projects. These staff have an extensive background in and knowledge of heavy industry, mining, building construction and energy.

On the Dilston project, BLH was responsible for the supply of quality, experienced and suitably qualified personnel as labour hire for Shaw Contracting in various facets of the project. The personnel included plant operators, truck drivers, water cart drivers, steel fixers, concreters, stringers, traffic management and general labourers. This involved working closely with the Shaw project management team and supervisors to understand their needs and to ensure that the required personnel were available with the required

skills and experience to undertake the tasks they were asked to complete, in a timely manner.

BLH were also required to recruit personnel through a screening process that included a medical and safety induction to ensure the candidates were fit for the duties they were asked to undertake and able to do so in a safe manner. BLH are proud to have been involved with Shaw Contracting on the Dilston Bypass Project.

Other major projects that BLH has worked on include the Tamar Valley Power Station and Olympic Dam for United Group Limited, the Bell Bay Power Station for Babcock & Brown and Alinta Energy for Transfield Worley.

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